

In the Claims

1. **(Previously Presented)** A method for configuring a product, comprising:
- initiating a configuration session in which a user configures a product comprising a configuration of items selected from a plurality of items;
 - generating a series of selection option sets, each selection option set comprising one or more items;
 - during the configuration session, for each of the series of selection option sets, receiving data from an available to promise engine regarding the one or more items in the selection option set;
 - during the configuration session, for each of the series of selection option sets, dynamically applying an optimization function with respect to each item in the selection option set according to the data received from the available to promise engine during the configuration session to identify an item of the selection option set as a default selection, the default selection being optimal among the one or more items of the selection option set with respect to the dynamically applied optimization function;
 - providing for presentation to the user the series of selection option sets, each selection option set comprising its identified default selection;
 - accepting from the user a selection of an item for each of the series of selection option sets; and
 - determining a configuration for the product in accordance with the selections of the items from the series of selection option sets.
2. **(Previously Presented)** The method of Claim 1, wherein each selection option set presented to the user is checked before presentation to confirm that all items in the selection option set are actually available to the user in accordance with a user-specified date constraint.
3. **(Previously Presented)** The method of Claim 1, wherein identifying an item of the selection option set as a default selection comprises identifying the item that provides an optimized fit according to the optimization function.
4. **(Previously Presented)** The method of Claim 1, wherein the optimization function maximizes manufacturer profit.


5. (Canceled)

6. **(Previously Presented)** The method of Claim 1, wherein the optimization function minimizes price to the user.

7. **(Previously Presented)** The method of Claim 1, wherein the optimization function is defined during the configuration session.

8. **(Previously Presented)** The method of Claim 1, wherein the optimization function is defined in response to an identification of the user during the configuration session.

9. **(Previously Presented)** The method of Claim 1, wherein the optimization function is defined in response to a product selection decision made by the user during the configuration session.



10. **(Previously Presented)** A method for configuring a product, comprising:
providing for presentation to a user during a configuration session a series of selection option sets, each selection option set comprising one or more items;
during the configuration session, for each of the series of selection option sets, receiving data from an available to promise engine regarding the one or more items in the selection option set;
during the configuration session, for each selection option set, before presenting the selection option set to the user, determining which of the items of the selection option set are actually available to the user in accordance with a user-specified date constraint and presenting only those items of the selection option set which are actually available to the user in accordance with the user-specified date constraint;
during the configuration session, for each of the selection option sets, identifying as a default selection an item that provides an optimized result according to a selected optimization function dynamically applied with respect to each item in the selection option set according to the data received from the available-to-promise engine during the configuration session; and
for each selection option set, accepting a selection of an item from the user.

11. **(Previously Presented)** The method of Claim 10, further comprising:
before any selection option sets are presented to the user, defining configuration information to provide the series of selection option sets to be presented to configure the product; and
within the determining step, determining which of the items in the defined configuration information are actually available to the user.

12. **(Previously Presented)** The method of Claim 11, further comprising:
as selections are made by the user, adding one or more constraints to later presented selection option sets; and
within the determining step, determining which of the items in the defined configuration information meet the one or more constraints added by user selections and are actually available to the user.

13. **(Previously Presented)** The method of Claim 10, wherein the selected optimization function is selected during the configuration session with the user in which the product configuration is performed.

14. **(Previously Presented)** The method of Claim 13, wherein the selected optimization function is selected as a function of an identity of the user during the configuration session.

15. **(Previously Presented)** The method of Claim 13, wherein the selected optimization function is selected by the user during the configuration session.

16. **(Previously Presented)** The method of Claim 10, wherein the default selection provides an optimized result according to a second optimization function in addition to the selected optimization function.

17. **(Previously Presented)** The method of Claim 10, wherein the selected optimization function comprises a function which minimizes price to the user.

18. **(Previously Presented)** The method of Claim 10, wherein the selected optimization function comprises a function which maximizes profit to a manufacturer.

19. **(Previously Presented)** The method of Claim 10, wherein the selected optimization function comprises a function which minimizes time to delivery of the product.

20. **(Previously Presented)** A system for configuring a product, comprising:
a configuration engine operable to, during a configuration session:

communicate with a user interface operable to display a plurality of lists of items to a user and to accept a plurality of selections from the user, each list comprising one or more items, each list comprising a default item; and

generate the lists of items according to stored configuration information; and
an available to promise engine operable to:

store information regarding availability of the items in the lists of items generated by the configuration engine; and

during the configuration session, for each list of items generated by the configuration engine, return to the configuration engine a sub-list of one or more of the items which are actually available to the user in accordance with a user-specified date constraint;

during the configuration session, for each of the one or more items in the sub-list which are actually available to the user in accordance with the user-specified date constraint, return to the configuration engine data regarding the item to enable dynamic application of an optimization function with respect to the item;

the default item for each list being determined during the configuration session by dynamically applying an optimization function to each item in the returned sub-list of one or more items which are actually available to the user in accordance with the user-specified date constraint, the optimization function being dynamically applied to the item according to the returned data regarding the item, the default item for each list being optimal among the one or more items in the returned sub-list with respect to the dynamically applied optimization function.

21. **(Previously Presented)** The system of Claim 20, wherein the configuration engine is operable to determine one or more of the lists of items in response to selections made by the user during the configuration session.

22. **(Previously Presented)** The system of Claim 21, wherein the configuration engine is operable to apply the optimization function to the sub-list of actually available items returned from the available to promise engine.

23. **(Previously Presented)** The system of Claim 21, wherein the available to promise engine is operable to:

apply the optimization function to the items which are actually available before returning the sub-list to the configuration engine; and
identify the default item when the sub-list of actually available items is returned.

24. **(Previously Presented)** The system of Claim 21, wherein:

for each list of items to be displayed to the user, the configuration engine is operable to pass to the available to promise engine a list of proper configuration items; and


for each list of proper configuration items, the available to promise engine is operable to:

determine which items are actually available to the user;
apply the optimization function to each actually available item; and
return to the configuration engine a sub-list of actually available items and an identification of which actually available item best matches the optimization function.

25. **(Previously Presented)** The system of Claim 20, wherein the optimization function comprises a function for minimizing product price.

26. **(Previously Presented)** The system of Claim 20, wherein the optimization function comprises a function for maximizing profits.

27. **(Previously Presented)** The system of Claim 20, wherein the optimization function comprises a function for minimizing delay until the product is available.



28. **(Previously Presented)** A method for configuring a product, comprising:

- initiating a configuration session in which a user configures a product, the product comprising a configuration of items selected from a series of lists, each list comprising one or more items selected from a plurality of items;
- during the configuration session, for each of the series of lists, receiving data from an available to promise engine regarding the one or more items in the list;
- during the configuration session, for each of the series of lists, dynamically applying an optimization function with respect to each item in the list according to the data received from the available to promise engine during the configuration session to identify a default selection comprising an item of the list that optimizes the dynamically applied optimization function relative to any other items in the list;
- providing for presentation to the user the series of lists each comprising the one or more items including the identified default selection for the list; and
- determining a configuration for the product in accordance with the selection of items from the series of lists.

29. **(Presently Presented)** The method of Claim 28, further comprising repeating the following for each list of the series of lists until a last list is reached:

- receiving from the user a selection of an item from a current list comprising one or more items;
- generating a next list comprising one or more items in accordance with the selection of the item from the current list;
- applying an optimization function with respect to each item in the next list to identify a default selection comprising an item of the next list that optimizes the optimization function relative to any other items in the next list; and
- providing for presentation to the user the next list comprising the one or more items including the identified default selection for the next list.

30. **(Previously Presented)** The method of Claim 29, wherein generating the next list comprises:

determining a valid item configuration for the product in accordance with the selection of the item from the current list and in accordance with a constraint restricting selection of an item for the product; and

generating the next list comprising only one or more items of the valid item configuration.

31. **(Previously Presented)** The method of Claim 29, wherein generating the next list comprises:

determining one or more items of the next list that are actually available to the user in accordance with a user-supplied date constraint restricting selection of an item for the product; and

generating the next list comprising only the one or more items of the next list that are actually available to the user in accordance with the user-supplied date constraint restricting selection of an item for the product.

32. **(Previously Presented)** The method of Claim 28, wherein the optimization function comprises a function for minimizing product price.

33. **(Previously Presented)** The method of Claim 28, wherein the optimization function comprises a function for maximizing profits.

34. **(Previously Presented)** The method of Claim 28, wherein the optimization function is selected as a function of an identity of the user.

35. **(Previously Presented)** The method of Claim 28, wherein the optimization function is selected by the user.

36. **(Previously Presented)** A system for configuring a product, the system comprising one or more software components embodied in computer-readable media that when executed are collectively operable to:

initiate a configuration session in which a user configures a product, the product comprising a configuration of items selected from a series of lists, each list comprising one or more items selected from a plurality of items;

during the configuration session, for each of the series of lists, receiving data from an available to promise engine regarding the one or more items in the list;

during the configuration session, for each of the series of lists, dynamically apply an optimization function with respect to each item in the list according to the data received from the available to promise engine during the configuration session to identify a default selection comprising an item of the list that optimizes the dynamically applied optimization function relative to any other items in the list;

provide for presentation to the user the series of lists each comprising the one or more items including the identified default selection for the list; and

determine a configuration for the product in accordance with the selection of items from the series of lists.

37. **(Previously Presented)** The system of Claim 36, operable to repeat the following for each list of the series of lists until a last list is reached:

receiving from the user a selection of an item from a current list comprising one or more items;

generating a next list comprising one or more items in accordance with the selection of the item from the current list;

applying an optimization function with respect to each item in the next list to identify a default selection comprising an item of the next list that optimizes the optimization function relative to any other items in the next list; and

providing for presentation to the user the next list comprising the one or more items including the identified default selection for the next list.

38. **(Previously Presented)** The system of Claim 37, operable to generate the next list by:

determining a valid item configuration for the product in accordance with the selection of the item from the current list and in accordance with a constraint restricting selection of an item for the product; and

generating the next list comprising only one or more items of the valid item configuration.

39. **(Previously Presented)** The system of Claim 37, operable to generate the next list by:

determining one or more items of the next list that are actually available to the user in accordance with a user-supplied date constraint restricting selection of an item for the product; and

generating the next list comprising only the one or more items of the next list that are actually available to the user in accordance with the user-supplied date constraint restricting selection of an item for the product.

40. **(Previously Presented)** The system of Claim 36, wherein the optimization function comprises a function for minimizing product price.

41. **(Previously Presented)** The system of Claim 36, wherein the optimization function comprises a function for maximizing profits.

42. **(Previously Presented)** The system of Claim 36, wherein the optimization function is selected as a function of an identity of the user.

43. **(Previously Presented)** The system of Claim 36, wherein the optimization function is selected by the user.
